

pyrazol-1-yl)methyl]propyl 2-oxo-3-[(2-pyridinylsulfonyl)amino]propylcarbamate), which are useful as cathepsin K inhibitors. The described invention also includes methods of making such ketone derivs. as well as methods of using the same in the treatment of disorders, including osteoporosis. Although the methods of preparation are not claimed, 19 example preps. are included. Each of the compds. exemplified in the Examples section bind with high affinity ($IC_{50} < 10 \mu M$) to the cathepsin K enzyme, e.g. (1S)-1-[[4-(1H-imidazol-1-yl)phenoxy]methyl]-2,2-dimethylpropyl (1S)-1-[[[(2-pyridinylsulfonyl)amino]acetyl]pentylcarbamate exhibits an IC_{50} of .apprx.10-1 nM or less. For I: A = (Q3)p-(Q2)n-(Q1)-(Q)m- (Q is CH₂ and m = 0-2, or Q is OCH₂ and m is 1, or Q is N(R₃)CH₂ and m is 1, where R₃ is H or C₁-C₆ alkyl; Q₁ is aryl, heteroaryl, or heterocyclyl; Q₂ is CH₂ and n is 0 or 1, or Q₂ is O and n is 1, or Q₂ is N(R₃) and n is 1, where R₃ is H or C₁-C₆ alkyl; Q₃ is aryl or heteroaryl and p is 0 or 1). R₁ is alkyl or cycloalkyl, said cycloalkyl may be optionally substituted with alkyl; D is O or S; R₂ is H or alkyl; and Z is -(X₁)q-(X₂) (X₁ is S(O)₂, C(O), or -CH₂-, and q = 0-2; and X₂ is aryl, heteroaryl, or heterocyclyl). For II: B is -(Q₁)a-(Q₂)b-(Q₃) (Q₁ is C(O), S(O)₂, or CR₂R₃, where R₂ and R₃ each = H or C₁-C₆ alkyl, and a = 0-3; Q₂ is O, S, NR₂, or CR₂R₃, where R₂ and R₃ each = H or C₁-C₆ alkyl, and b = 0-3; and Q₃ is aryl, heteroaryl, heterocyclyl, aralkyl, or alkyleneheterocyclyl). R₁ is H or alkyl; Z is -(X₁)q-(X₂) (X₁ is S(O)₂, C(O), or alkyl, and q is 0 or 1; and X₂ is aryl, heteroaryl, or heterocyclyl).

REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 39 OF 78 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:142659 CAPLUS

DOCUMENT NUMBER: 136:184119

TITLE: Preparation of (hydroxyethyl)ureas as inhibitors of Alzheimer's β -amyloid production

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SOURCE: PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002014264	A2	20020221	WO 2001-US25267	20010810
WO 2002014264	A3	20020530		
W: AU, CA, JP				
RW: AT, BE, CH, PT, SE, TR				
AU 2001081250	A5	20020225	AU 2001-81250	20010810
US 2002111365	A1	20020815	US 2001-927913	20010810
US 6696488	B2	20040224		

PRIORITY APPLN. INFO.: US 2000-225043P P 20000811
WO 2001-US25267 W 20010810

OTHER SOURCE(S): MARPAT 136:184119

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398515-99-6P 398516-03-5P 398516-06-8P
398516-08-0P 398516-10-4P 398516-13-7P
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